



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/691,117

10/21/2003

David J. Vachon

1695.003

5330

26813

7590

06/03/2009

MUETING, RAASCH & GEBHARDT, P.A.

P.O. BOX 581336

MINNEAPOLIS, MN 55458-1336

EXAMINER

BROOKS, KRISTIE LATRICE

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

06/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/691,117	Applicant(s) VACHON ET AL.	
	Examiner KRISTIE L. BROOKS	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-17,30-32 and 34-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-17,30-32, and 34-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/26/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 26, 2009 has been entered.

Status of Application

2. Claims 15-17, 30-32 and 34-48 are pending. Claims 40-48 are new.
3. Receipt and consideration of Applicants remarks/arguments submitted on February 26, 2009 is acknowledged.
4. Rejections not reiterated from the previous Office Action are hereby withdrawn. The following rejections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 15-17, 29-30, 34-46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klier et al. (US 2004/0081829).

Applicant claims a method for controlling biological organisms on a porous surface said method comprising forming a water-insoluble coating comprising at least one salt of a polysulfonated block polymer hydrogel on the porous surface said porous surface is an article selected from the group comprising a garment, a gas filter, a laboratory work surface, a laboratory wipe, and a wound dressing or said porous surface comprises paper or fabric.

Determination of the scope and content of the prior art
(MPEP 2141.01)

Klier et al. teach an absorbent polymer composition comprising A) sulfonated substantially random interpolymers and B) one or more polymers other than said sulfonated substantially random interpolymers (see page 1 paragraph 4 and page 2 paragraphs 19-24). The sulfonated substantially random interpolymers are derived from ethylene and/or one or more alpha olefins (i.e. propylene, butene-1, hexen-1, etc.), one

Art Unit: 1616

or more sulfonated vinyl or vinylidene aromatic monomers, and vinyl or vinylidene aromatic monomers (i.e. styrene) (see page 3 paragraph 46-47, and page 4 paragraphs 48-49). The one or more polymers other than said sulfonated substantially random interpolymer include homogenous α -olefin homopolymer or interpolymer, block copolymers, such as SIS, SEBS, thermoplastic polyurethanes, etc. (see page 6 paragraphs 72-73). The sulfonated substantially random interpolymers can be in either the sulfonic acid form, or as a neutralized or partially neutralized salt with neutralizing agents or bases, such as, ammonium, ammonium hydroxide, sodium hydroxide, etc. (see page 1 paragraph 4 and page 6 paragraph 68). The absorbent polymer compositions can be used on articles for personal hygiene, such as diapers, or absorbent wipes, fabrics, garments, films, bandages, medical applications for delivering pharmaceuticals, etc. (see page 2 paragraph 25, page 3 paragraph 34, and page 12 paragraphs 139-141). The article may be crosslinked or uncrosslinked dependent on the article made (see column

**Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)**

Klier et al. do not exemplify forming a coating with the instant salt of a polysulfonated hydrogel on the instantly claimed porous surfaces. Further, Klier et al. do not exemplify the instant method of controlling biological organisms on a porous surface with the instant salt of a polysulfonated hydrogel.

Finding of prima facie obviousness
Rational and Motivation (MPEP 2142-2143)

One of ordinary skill in the art would have been motivated to form a coating with the instant salt of a polysulfonated hydrogel on the instantly claimed porous surfaces because Klier et al. suggest the instant compounds for the preparation of and application to fabrics, garments, bandages, films, wipes, diapers, etc. or any article used for absorbent purposes.

Thus, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to form a coating with the instant salt of a polysulfonated hydrogel on the instantly claimed porous surfaces since they are all useful absorbent articles that the instant compounds are useful for.

With regard to the preamble in claim 1 and 39, i.e. a method for controlling biological organisms on a porous surface, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to control biological organisms with the instant polysulfonated hydrogel because, absence evidence to the contrary, since the method steps of the prior art and the instant invention are the same, i.e. forming a coating on a porous surface with the same salt of a polysulfonated hydrogel, the claimed method would implicitly occur upon application to said porous surface.

Therefore, the claimed method would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made because the prior art is fairly suggestive of the claimed method.

7. Claims 31-32 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klier et al. (US 2004/0081829) in view of Wood et al. (US 5,260,066).

Applicant claims a method for controlling biological organisms on a porous surface said method comprising forming a water-insoluble coating comprising at least one salt of a polysulfonated hydrogel on the porous surface said porous surface is an article selected from the group comprising a garment, a gas filter, a laboratory work surface, a laboratory wipe, and a wound dressing or said porous surface comprises paper or fabric.

Determination of the scope and content of the prior art
(MPEP 2141.01)

Klier et al. teach an absorbent polymer composition comprising A) sulfonated substantially random interpolymers and B) one or more polymers other than said sulfonated substantially random interpolymer (see page 1 paragraph 4 and page 2 paragraphs 19-24). The sulfonated substantially random interpolymers are derived from ethylene and/or one or more alpha olefins (i.e. propylene, butene-1, hexen-1, etc.), one or more sulfonated vinyl or vinylidene aromatic monomers, and vinyl or vinylidene aromatic monomers (i.e. styrene) (see page 3 paragraph 46-47, and page 4 paragraphs

Art Unit: 1616

48-49). The one or more polymers other than said sulfonated substantially random interpolymer include homogenous α -olefin homopolymer or interpolymer, block copolymers, such as SIS, SEBS, thermoplastic polyurethanes, etc. (see page 6 paragraphs 72-73). The sulfonated substantially random interpolymers can be in either the sulfonic acid form, or as a neutralized or partially neutralized salt with neutralizing agents or bases, such as, ammonium, ammonium hydroxide, sodium hydroxide, etc. (see page 1 paragraph 4 and page 6 paragraph 68). The absorbent polymer compositions can be used in the preparation and for application to articles for personal hygiene, such as diapers, or absorbent wipes, fabrics, garments, films, bandages, medical applications for delivering pharmaceuticals, etc. (see page 2 paragraph 25, page 3 paragraph 34, and page 12 paragraphs 139-141).

**Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)**

Klier et al. do not exemplify forming a coating with a tetracycline, such as, doxycycline. This deficiency is cured by the teachings of Wood et al.

Wood et al. teach a controlled release bandage comprising therapeutic agents in polymeric cryogels (see the abstract). The bandage provides a controlled release and a sterile infection resisting bandage for protecting sites against damage (see column 3

Art Unit: 1616

lines 15-17). An example of a therapeutic agent includes tetracycline's (tetracycline, doxycycline, etc.) (see page 5 lines 3-6).

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

One of ordinary skill in the art would have been motivated to incorporate a tetracycline, such as, doxycycline, in the instant polysulfonated hydrogel coating because Klier et al. suggest the instant compounds are useful in bandages and medical applications for delivering pharmaceuticals.

Thus, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate a tetracycline, such as, doxycycline, in the instant coating because it is obvious additional component to be added to polymeric compositions in medical bandages for delivering pharmaceuticals as suggested by Wood et al. Furthermore, it will enhance the effectiveness of the coating by providing additional protection against the growth of biological organisms.

Therefore, the claimed method would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made because the prior art is fairly suggestive of the claimed method.

Response to Arguments

Applicant's arguments filed February 26, 2009 have been fully considered but they are not persuasive.

Applicant argues that the polysulfonated block hydrogels are different from the presently claimed sulfonated substantially random interpolymers disclosed by Klier et al. Applicant, further adds evidence by pointing to the instant specification that discloses the intended benefits of the instantly claimed polysulfonated block polymers hydrogels.

These arguments are not convincing. Applicant claims polysulfonated block polymer hydrogels. The amount of polymers and different combination of polymers that are encompassed by the instant claim is very broad. Klier et al. teach the use of sulfonated interpolymers that are absorbent. The term "interpolymers" includes using at least two different monomers that are polymerized to make the interpolymer. Thus, block polymers are encompassed by the term "interpolymers". Furthermore, it is known in the art that interpolymers are formed by the use of block polymers and can result in the production of block terminated block polymers (as evidenced by Wollum et al. US 6,162,874). Thus, Applicant has not provided any evidence to suggest that the sulfonated interpolymers taught by Klier et al. cannot be polysulfonated block polymers. Moreover, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., added benefits) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Next, Applicant argues that the preparation of the polysulfonated block copolymer requires the use of cross-linking agents.

Art Unit: 1616

This argument is not convincing. Klier et al. describes the use of absorbent and/or superabsorbent applications. Although Klier et al. teach a superabsorbent polymer that is prepared by the use of crosslinking agents for superabsorbent applications, this teaching is not in reference to the preparation of the sulfonated interpolymer blend that is used with the absorbent applications (see page 3 paragraph 33). Thus the cross-linking agents are not required for use in the preparation of the sulfonated interpolymer blend.

Therefore Applicant's arguments of nonobviousness is not persuasive and the rejection is maintained.

Conclusion

8. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTIE L. BROOKS whose telephone number is (571)272-9072. The examiner can normally be reached on M-F 8:30am-6:00pm Est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KB

/Johann R. Richter/
Supervisory Patent Examiner, Art Unit 1616